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ABSTRACT

As originally developed, Projecto Exito, often referred to as the Bilingual Community School or simply as "Escuelita," was in name and in deed a comprehensive community-based approach to the problems of bilingual education, funded under Title VII of the 1965 Elementary Secondary Education Act. Intended to serve Spanish and English-speaking students in direct proportion to their distribution within the Barnard-Brown attendance area, the program was planned so as to include two interrelated dimensions. Exito was to serve a demonstration effort in bilingual education which could then be expanded to other populations if the results were favorable; it was also to serve as a bilingual community school which could and would provide direct services to students ranging from preschool to adult education. While the evaluation design was a relatively straight forward pre-post-test model, a number of operational controls were build in to the design so as to insure program validity to the resultant data. The design included pre- and post-measures which could be administered not only on a grade by grade basis, but over a longitudinal period as well. While the design did attend to affective indications of change, data in this area were not reported; instead, only various forms of the "Inter-America Test of General Ability" were used. (Author/JM)

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HARTFORD MOVES AHEAD

An Evaluative Report

HARTFORD PUBLIC SCHOOLS·249 HIGH STREET·HARTFORD, CONNECTICUT 06103

ED 097397

EXITO

TITLE VII

ESEA

1973 - 1974

Evaluation Office
Hartford Connecticut Public Schools
September 1974

PROJECTO EXITO

- An Analysis of Academic Test Scores -

Overview

As originally developed, Projecto Exito, often referred to as the Bilingual Community School or simply as "Escuelita," was in name and in deed a comprehensive community-based approach to the problems of bilingual education. Intended to serve Spanish and English-speaking students in direct proportion to their distribution within the Barnard-Brown attendance area, the program was planned so as to include two inter-related dimensions. Exito was to serve a demonstration effort in bilingual education which could then be expanded to other populations if the results were favorable; it also was to serve as a bilingual community school which could and would provide direct services to students ranging from pre school to adult education.

In the original funding proposal, Projecto Exito was to have been evaluated on both a short and long-term basis; objectives were identified not only for the first year, but on a longitudinal basis as well. Further, the evaluation design was to attend to a comprehensive analysis of the project. It was to consider not only the instructional component, but the other components of curriculum materials, staff development, and community involvement as well. To provide these data, a full time internal evaluator who was bilingual/bicultural and a certified psychological examiner was to

have been employed.

The actual Exito differed somewhat from the conception of the program in the funding documents. Since funding limitations did not allow for the employment of a full time internal evaluator, evaluation responsibilities fell upon the shoulders of the project coordinator and the bilingual school principal and these were additional duties. In addition, reduced program operations were reduced to some extent, notably in terms of the higher grade levels (grades 5-8) and the adult education component. And finally, during both the first and second years of the program, the project director was informed that the evaluation itself should attend only to the instructional component and to its product objectives, rather than include the other components, and the process objectives as well.

Evaluation

Given the foregoing considerations, and the fact that adequate bilingual instrumentation were still not available, the Exito staff embarked upon newly modified evaluation requirements. This evaluation which was designed by Dr. John Greene of the University of Bridgeport, can be summarized in the following table.

Level	Objective	Instrument
Preschool, K	progress in aural-oral abilities in Spanish & English...	Inter-American Tests of General Ability, Oral Vocabulary subtest, preschool level
	demonstrate gains in numerical concept development...	Inter-American Tests of General Ability, Number subtest, preschool level, (test in dominant language)
Grades 1, 2	progress in aural-oral abilities in Spanish & English...	Inter-American Tests of General Ability, Oral Vocabulary subtest, Level I
	demonstrate gains in numerical concept development...	Inter-American Tests of General Ability, Number subtest, Level I, (test in dominant language)
Grade 2	show progress in reading ability in dominant language	Inter-American Test of Reading, Level I, (test in dominant language)
	improve level of self-esteem	Coopersmith Self-Esteem Inventory (revised, oral administration in dominant language)
Grade 3	progress in aural-oral abilities in Spanish & English...	Inter-American Tests of General Ability, Oral Vocabulary subtest, Level II
	demonstrate gains in arithmetic skills	Inter-American Tests of General Ability, Number subtest, Level II (test in dominant language
	show progress in reading ability in Spanish and English	Inter-American Tests of Reading, Level II
	Improve level of self-esteem	Coopersmith Self-Esteem Inventory (revised, oral administration in dominant language)

While the evaluation design was a relatively straight forward pre - post test model, a number of operational controls were built in to the design so as to insure program validity to the resultant data. The same test form was to be used both pre and post so as to eliminate form equivalence problems; this despite the fact that the test literature pointed out no questions in this regard. Since the design was to collect longitudinal data, and while the same test form would be repeated pre to post and on a language basis, forms would be alternated in subsequent years. Since the oral vocabulary subtest can be used as an indicator of language dominance, the remaining testing can proceed from that point; either in English, Spanish, or on a transitional basis.

There were some additional design changes. While the original model provided for the administration of the Coopersmith Self-Esteem Inventory in grades 2 and 3, the Exito staff felt that the CSEI was not an appropriate instrument. In consequence, the CSEI was eliminated from the test inventory and the Tri-Cultural Attitude Scale substituted instead.

Questions and Tentative Findings

Based on the specification of objectives and the data which could be collected, a series of evaluative questions were posed and some tentative findings reported.

1. Did Exito youngsters improve, and at a statistically significant level (.01) in their mastery of oral language in Spanish and English over the course of the school year?

   a. When the Inter-American Tests of General Ability, oral vocabulary subtests, were administered pre and post and at the appropriate test level which was specified in the evaluation design, statistically significant mean gains could be reported. Note that these data are reported in raw scores since appropriate norms have not as yet been developed either for Hartford or for the Connecticut area.

TABLE 1

Comparison of Oral Vocabulary Mean Gains by Spanish Language Dominance, 1973-74 School Year

Grade & Test	N	Pre test	Post test	Dif.	Sig.
Grade 1					
Spanish	33	12.2	17.1	4.9	.01
English	33	6.5	10.8	4.3	.01
Grade 2					
Spanish	22	18.2	19.3	1.1	NS
English	26	13.7	14.1	.4	NS
Grade 3					
Spanish	19	17.1	15.6	-1.5	NS
English	19	10.3	13.6	3.3	.01
Grade 4					
Spanish	16	17.1	18.1	1.0	NS
English	16	11.0	15.1	4.1	.01

As can be seen in Table 1, the Spanish dominant youngsters made gains which reached the stated level of significance (.01) in English vocabulary at all grade levels except grade 2, and in Spanish vocabulary at the first grade level. Based on the stated criterion, it would appear that good progress had been made in English, although progress in Spanish appeared to have been negligible.

TABLE 2

Comparison of Oral Vocabulary Mean Gains by English Language Dominance, 1973-74 School Year

Grade & Test	N	Pre test	Post test	Dif.	Sig.
Grade 1					
Spanish	4	10.0	15.0	5.0	NS*
English	4	14.8	13.3	-1.5	NS*
Grade 2					
Spanish	8	10.1	13.6	3.5	NS*
English	8	17.0	19.0	2.0	NS*
Grade 3					
Spanish	11	10.4	13.7	3.3	.05*
English	11	16.0	15.0	-1.0	NS*
Grade 4					
Spanish	8	11.8	13.6	1.8	NS*
English	8	16.5	13.9	-2.6	NS*

Table 2 provides the same comparative data for the English dominant youngsters. Note that because of the extremely small numbers which were tested, all data should be considered on an individual rather than a group basis. This is why the test of significance has been qualified by an asterisk to indicate that these figures are at best questionable since any t-test is generally inappropriate with groups which number less than 15 and questionable with groups which do not number at least 30.

TABLE 3

Comparison of Oral Vocabulary Mean Gains by Transitional Language Dominance, 1973-74 School Year

Grade & Test	N	Pre test	Post test	Dif.	Sig.
Grade 1					
Spanish	11	10.2	15.0	4.8	.01*
English	11	9.6	12.4	2.8	.05*
Grade 2					
Spanish	15	13.7	17.4	3.7	.01
English	15	13.7	16.0	2.3	NS
Grade 3					
Spanish	22	13.9	15.0	1.1	NS
English	22	14.0	15.6	1.6	.05
Grade 4					
Spanish	13	15.7	16.8	1.1	NS*
English	13	15.6	16.7	1.1	NS*

Table 3 presents comparative oral vocabulary data on the youngsters who were judged to fit into the transitional category on the basis of their test scores. This placement resulted when the split was less than three points between the Spanish and English vocabulary tests. When less than a three point split occurred, the youngster was judged to have approximately equal dominance in Spanish and in English in terms of the test data. While an analysis of placements based on the language dominance test supplemented by teacher judgment was also made, this factor will be discussed at a later point in the evaluation.

At a second grade level, statistically significant mean gains (.01) were achieved over the period of testing in Spanish, while at the third grade level a slightly lower level of significance (.05) was achieved in English.

2. Using the same criterion level (.01), did the Exito group demonstrate mean gains in numerical concept development over the length of the program ?

Again the various data were analyzed by grade and by language dominance and these are reported in Table 4 which follows.

TABLE 4

Comparison of Numerical Concept Mean Gains by Language Dominance, 1973-74 School Year

Grade & Test	N	Pre test	Post test	Dif.	Sig.
Grade 1					
Spanish	33	4.5	8.6	4.1	.01
English	4	6.8	9.8	3.0	NS*
Transitional	11	4.6	8.9	4.3	.01*
Grade 2					
Spanish	26	9.8	11.3	1.5	NS*
English	8	10.9	12.4	1.5	NS*
Transitional	15	8.3	10.6	2.3	.01
Grade 3					
Spanish	19	11.2	15.8	4.6	.01
English	11	8.8	13.6	4.8	.01*
Transitional	22	13.5	16.2	2.7	NS
Grade 4					
Spanish	16	13.1	17.2	4.1	.01
English	8	11.5	16.1	4.6	.01*
Transitional	13	15.4	17.9	2.5	.01*

When arithmetic score changes on the Inter American Number subtest were examined, patterns of gains were somewhat inconclusive. This was largely due to the fact that the test groups, with the exception of Spanish dominant youngsters, were too small to assess the gains using a statistical test of mean differences. For the Spanish-dominant youngsters, gains reached the specified significance level (.01) at the first, third, and fourth grade levels with only grade 2 failing to attain the standard. Only at the second and third grade levels were there enough transitional youngsters for the t-test to be somewhat valid; of these, only the second grade youngsters reached standard.

3. Were pre to post mean reading gains statistically significant over the course of the project year?

Once dominance had been established, youngsters were then tested pre and post on the Inter-American Reading subtest but only in the language of dominance. For the transitional children, and for children in grades 3 and 4, tests in both languages were administered. The results of these testings are shown in Table 5. Note that the Reading test was not administered at the first grade level since it was inappropriate for use with children of that age.

TABLE 5

Comparison of Reading Mean Gains by Language Dominance,

1973-74 School Year

Grade, Test & Dominance	N	Pre test	Post test	Dif.	Sig.
Grade 2					
Spanish-Span.	26	13.1	43.0	29.9	.01
English-Eng.	6	35.5	66.7	31.2	.01*
Trans. - Span.	7	17.4	22.5	5.1	NS*
Trans. - Eng.	5	24.6	64.6	40.0	.01*
Grade 3					
Span. - Span.	19	20.6	32.7	12.1	.01
Span. - Eng.	19	21.2	30.8	9.6	.01
Eng. - Span.	11	20.6	32.7	12.1	.05*
Eng. - Eng.	11	31.9	35.5	3.6	NS*
Trans. - Span.	22	23.3	34.0	10.7	.01
Trans. - Eng.	22	25.1	32.0	6.9	.05
Grade 4					
Span. - Span.	16	35.5	43.0	7.5	NS
Span. - Eng.	16	31.1	35.0	3.9	NS
Eng. - Span.	8	23.1	37.9	14.8	.01*
Eng. - Eng.	8	29.6	33.8	4.2	NS*
Trans. - Span.	13	33.5	46.6	13.1	.01*
Trans. - Eng.	13	34.5	48.2	13.7	.01*

When the Inter American Reading subtest was administered at the grades 2 through 4 levels on a pre and post year basis, gains reached the stated level of significance (.01) for the Spanish dominant youngsters in grade 2 in Spanish and in grade 3 both in Spanish and in English. In addition, third grade transitional youngsters also reached the specified level of attainment in Spanish. Other recorded changes were either nonsignificant or involved numbers which were too small for the voted assessment of changes on a statistical basis.

4. Were there apparent differences in gains which resulted from actual class placement using the Inter American Test of oral vocabulary as the basic criterion, but supplementing test scores with the teacher's judgment of language dominance?

   Once again data were analyzed in the same ways, but on the basis of actual class placements. These data have been reported in Table 6 through 10 which follows.

TABLE 6

Comparison of Oral Vocabulary Mean Gains by Spanish Language Dominance Placement

1973-74 School Year

Grade & Test	N	Pre test	Post test	Dif.	Sig.
Grade 1 Spanish	27	11.8	16.9	5.1	.01
English	27	6.6	10.3	3.7	.01
Grade 2 Spanish	20	17.2	18.6	1.4	.05
English	20	13.8	12.8	-1.0	NS
Grade 3 Spanish	26	14.6	14.4	- .2	NS
English	26	12.7	14.1	1.4	NS
Grade 4 Spanish	21	15.1	17.2	2.1	.05
English	21	12.9	14.7	1.8	NS

TABLE 7

Comparison of Oral Vocabulary Mean Gains by English Language Dominance Placement

1973 - 74 School Year

Grade & Test	N	Pre test	Post test	Dif.	Sig.
Grade 1					
Spanish	14	11.0	15.6	4.6	.01*
English	14	9.3	12.8	3.5	.01*
Grade 2					
Spanish	14	12.1	15.5	3.4	.01*
English	14	15.6	18.4	2.8	.05*
Grade 3	6	13.3	15.3	2.0	NS*
Spanish					
English	6	15.3	15.6	.3	NS*
Grade 4					
Spanish					
English					

TABLE 8

Comparison of Oral Vocabulary Mean Gains by Transitional Language Dominance Placemen

1973-74 School Year

Grade & Test	N	Pre test	Post test	Dif.	Sig.
Grade 1					
Spanish	8	10.4	15.6	5.2	.05*
English	8	8.5	11.4	2.9	.05*
Grade 2					
Spanish	15	16.5	18.9	2.4	.05
English	15	13.6	16.4	2.8	.01
Grade 3					
Spanish	20	14.3	15.6	1.3	NS
English	20	12.9	15.5	2.6	.01
Grade 4					
Spanish	16	15.8	16.0	.2	NS
English	16	15.1	16.3	1.2	NS

TABLE 9

Comparison of Numerical Concept Mean Gains by Language Dominance Placement

1973-74 School Year

Grade & Test	N	Pre test	Post test	Dif.	Sig.
Grade 1					
Spanish	27	4.0	8.7	4.7	.01
English	14	5.9	8.6	2.7	.01*
Transitional	8	4.6	8.4	3.8	.01*
Grade 2					
Spanish	20	9.5	10.3	.8	NS
English	14	9.9	12.3	.4	.01*
Transitional	15	9.1	11.6	2.5	.01
Grade 3					
Spanis	26	9.8	13.1	3.3	.01
English	6	8.3	16.0	8.0	.01*
Transitional	20	15.1	18.5	3.4	NS
Grade 4					
Spanish	21	13.0	16.9	3.9	.01
English	--	----	----	---	---
Transitional	16	14.4	17.6	3.?	.01

TABLE 10

Comparison of Reading Mean Gains by Language Dominance Placement, 1973-74 School Year

Grade, Test & Dominance	N	Pre test	Post test	Dif.	Sig.
Grade 2					
Spanish-Span.	19	14.0	40.8	26.8	.01
English-Eng.	-	-	-	-	-
Trans. - Span.	14	14.1	35.8	21.7	.01
Trans. - Eng.	1	74.0	78.0	4.0	.01*
Grade 3					
Span. - Span.	26	22.4	36.6	14.1	.01
Span. - Eng.	26	20.2	25.6	5.4	.05
Eng. - Span.	6	18.7	32.8	14.1	.05*
Eng. - Eng.	6	30.5	44.0	13.5	NS*
Trans. - Span.	20	31.0	42.2	11.2	.05
Trans. - Eng.	20	25.1	32.0	6.9	.05
Grade 4					
Span. - Span.	21	35.5	43.3	7.2	.05
Span. - Eng.	21	28.1	34.3	6.2	.05
Eng. - Span.	-	-	-	-	-
Eng. - Eng.	-	-	-	-	-
Trans. - Span.	16	27.7	43.0	15.3	.01
Trans. - Eng.	16	37.1	46.0	8.9	.05

When test data were examined on the basis of actual class placements at the first grade level the level of significance which had been specified in the objective statement (.01) was reached, and in the same areas which were reported in Table 1, Actual gains however were slightly larger. At no other point was the specified level of significance attained, although test placement did produce .01 levels for grades three and four Spanish dominant youngsters who were tested in English.

For the English dominant youngsters placement results were comparable to those reported in Table 2. Again the small numbers tested produced a gain picture which was not amenable to statistical assessment.

For the transitional youngsters, the specified .01 level was attained on the English test in grades 2 and 3. While difference in gain scores were slightly greater in actual placement, differences themselves were negligible so that other comparisons between Tables 3 and 8 data could not be made.

On the test of numerical concept, again placement gain patterns were comparable to the test patterns recorded on Table 4. For the grade 4 transitional youngsters, the level of significance was reached for a large enough group of youngsters to make the test of significance valid. While

the .01 level had been reached only 13 youngsters were involved in the test placement reported in Table 8.

On the reading subtest, score patterns between actual and test placements were comparable, although at the fourth grade level gains the amount of gain seemed to improve with actual placement. Generally, however, the gain patterns were the same.

Summary and Conclusions

Hartford's first bi-lingual school, Projecto Exito, often referred to as Escuelita, was planned as a comprehensive community based bi-lingual school. Because of this planned comprehensiveness, Exito was to have been evaluated on both a short and a long term basis and in terms of educational products and processes as well. Because of funding constraints which occurred after the development of the program, the evaluation had to be refocused so as to attend only to product assessments as these were contained in the instructional component alone. Here the evaluation design was redefined so as to include pre and post measures which could be administered not only on a grade by grade basis, but over a longitudinal period as well. While the design did attend to affective indications of change, data in this area were not reported; instead, only various forms of the Inter-American Test of General Ability were used. Fundings from these various data, while reported more fully in the evaluation, can be summarized as follows:

1. When youngsters were tested with the Inter-American Test of Oral Vocabulary and grouped according to the language dominance which was derived from test scores alone, the Spanish dominant youngsters made gains which reached the specified significance level in English vocabulary at all grade levels except grade two, and in Spanish vocabulary at the first grade level. Here it would appear that good progress had been made in English although test progress in Spanish appeared to be negligible. Because of the small numbers of English dominant youngsters, test data could not be assessed on a statistical basis.

2. Youngsters who had been judged to be transitional in terms of language dominance, and on the basis of test scores only, achieved statistically significant mean gains in Spanish at the first grade level. At the third grade level, gains reached a lower level of significance (.05) on the English test although this level did not meet the stated criteria. Other gains were either nonsignificant or involved small numbers of youngsters only.

3. When Exito youngsters were tested on the number concepts subtest, gain patterns were somewhat inconclusive because of the small numbers of youngsters in both the English and transitional groups. Spanish dominant youngsters attained

mean gains which reached the specified level of significance at the first, third, and fourth grade levels with only grade 2 failing to attain standard. Of the transitional youngsters who were tested, only at the second grade level was the standard attained.

4. On the basis of reported data, it can also be presumed that while Exito Spanish dominant youngsters made substantial improvements in number concepts at the grade levels reported, for the English and transitional youngsters, the question of objective attainment needs further investigation.

5. When the Exito youngsters were tested in reading, appropriate gains levels in accord with the stated objective criterion were attained for Spanish dominant youngsters in grade 2 on the Spanish test and in grade 3 on both the Spanish and English tests. In addition, while grade 3 transitional youngsters also reached the stated level of attainment in Spanish. Other recorded changes were either nonsignificant or involved numbers that were too small for a statistical assessment. Here again it would appear that the Spanish dominant youngsters made the larger amounts of gain.

6. When the same Inter American test data were reanalyzed in terms of the youngsters actual language dominance placement, a placement which resulted from test scores and teacher judgments, patterns of gains were comparable to those which have already been reported. Since same gain levels were slightly larger, it can be concluded that teacher judgment should continue to play an important part in the actual placement of youngsters and should necessarily supplement existent test data.

7. While no information was reported regarding changes in Exito youngsters self esteem as a result of the program, the concept of the community school inherent in Exito mandates this as an important area of consideration for future evaluations.

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